UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,536	08/31/2001	Lee C. Moore	D/A0A45	3291

7590 03/17/2008

Patrick R. Roche, Esq.
Fay, Sharpe, Fagan, Minnich & McKee, LLP
1100 Superior Avenue, 7th Floor
Cleveland, OH 44114-2518

EXAMINER	
KOYAMA, KUMIKO C	
ART UNIT	PAPER NUMBER
2887	

MAIL DATE	DELIVERY MODE
03/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/944,536	MOORE, LEE C.	
	Examiner	Art Unit	
	KUMIKO C. KOYAMA	2887	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,4-8,10-13,15-18 and 20-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7 and 8* is/are allowed.

6)☒ Claim(s) *2,4-6,10-13,15-18 and 20-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application.
6) ☐ Other: _____.

DETAILED ACTION

Pre-Brief Conference Request received on October 24, 2007 has been acknowledged. Upon careful review of the Pre-Brief Conference Request, the Examiner found some arguments to be persuasive. Therefore, this action is Non-Final.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2, 4, 5, 10-13, 18 and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sotomayor (US 5,963,205) in view of Saito et al (US Patent Application 2001/0042083 A1).

Re claims 2, 4, 5 and 22-27: Sotomayor discloses an automatic index creation for a word processor. Sotomayor discloses that the IPF paragraph objects for the source document 20 is scanned to find all headings in a document (col 15, lines 60-63). Such disclosure teaches searching the document to find occurrences of items corresponding to the define sub-section delimiter. Sotomayor also discloses that for the table-of-contents index list 43, the summary page generator 40 always generates all 6 heading levels rather than giving the user the ability to select the number of level headings (col 15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches

generating the index for the document with all found items corresponding to the sub-section delimiter occurrences.

Satomayor fails to teach determining a sub-section delimiter definition including at least one delimiter characteristic, wherein determining a sub-section delimiter comprises a user indicating at least one of a font size, a font style, a text string, a text location description, and a specific point coordinate within the document or wherein determining a sub-section delimiter comprises a user placing a predetermined machine-readable symbol representing a demarcation point on a printed version of the document as the sub-section delimiter.

Saito discloses an exemplary search template that includes an user-defined element name, their corresponding coordinates, indentation, font size, font type, as well as no of lines (Paragraph [0050], lines 3-6). Saito also discloses that for example, a minimal circumscribing rectangle for an area including "TITLE" is located at (867, 811, 2244, 878) and is centered. Saito also discloses a document image input unit 200 that inputs a document (Paragraph [0040], lines 6-7), and if the received data represents a color image, the pre-processing unit 201 also digitized the image data into binary data (Paragraph [0041], lines 10-15). Saito also discloses an optical character recognition unit that converts alphanumeric characteris in the character sub area into computer recognizable data such as in ASCII format (Paragraph [0041], lines 1-15). Saito also discloses a font recognition unit determines the size and type of the optically recognized characters (Paragraph [0041], lines14-16).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Saito the teachings of Satomayor in order to create and table of index including all the titles of the document as well as the section titles.

Re claims 10-13: Sotomayor discloses an automatic index creation for a word processor. Sotomayor discloses that the IPF paragraph objects for the source document 20 is scanned to find all headings in a document (col 15, lines 60-63). Such disclosure teaches a delimiter searcher operative to search for location information regarding the occurrences corresponding to the delimiter definition with the electronic version of the document. Sotomayor also discloses that for the table-of-contents index list 43, the summary page generator 40 always generates all 6 heading levels rather than giving the user the ability to select the number of level headings (col 15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches a document divider operative to divide the document into sub-sections based on the recorded information regarding the occurrences corresponding to the delimiter definition.

Sotomayor fails to teach a document input device operative to provide an electronic version of a document, a document storage device operative to store the electronic version of the document, a delimiter search to search for and record text and text location, a user interface operative to transfer information between a document processor operator and portions of the document processor, and a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation for the delimiter definition.

Saito discloses a document image input unit 200, which is a document input device operative to provide an electronic version of a document; a database storage unit 213, which is a document storage device operative to store the electronic version of the document; a search template unit 800, which is a delimiter search (Paragraph [0040], lines 1-10). Saito discloses an exemplary search template that includes an user-defined element name, their corresponding

coordinates, indentation, font size, font type, as well as no of lines (Paragraph [0050], lines 3-6). Saito also discloses a user interface (Paragraph [0049], lines 1-3), which is a user interface operative to transfer information between a document processor operator and portions of the document processor. Saito also discloses generating a search template and database (Paragraph 0049), lines3-5), which teaches a delimiter designator module operative to communicate with the document processor operator through the user interface in order to generate at least one delimiter designation for the delimiter definition. Figure 8 shows displaying of a plurality of document portions (Fig. A and Fig. B) on the user interface for the document processor operator to view while determining the at least one delimiter designation.

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Saito the teachings of Satomayor such that any paper document can be transformed into an electronic version and stored onto a database for easy retrieval as well as avoid losing documents.

Re claims 18 and 28: Sotomayor discloses an automatic index creation for a word processor. Sotomayor discloses that the IPF paragraph objects for the source document 20 is scanned to find all headings in a document (col 15, lines 60-63). Such disclosure teaches searching to find occurrences of items that correspond to the defined sub-section delimiter. Sotomayor also discloses that for the table-of-contents index list 43, the summary page generator 40 always generates all 6 heading levels rather than giving the user the ability to select the number of level headings (col 15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches using the found items to separate the document into the separate sections.

Sotomayor fails to teach scanning the document to generate scanned document data and performing recognition functions on the scanned document data to generate a recognized version of the document. Sotomayor also fails to teach defining a sub-section delimiter, wherein defining the sub-section delimiter includes at least one of a document processor operator building a sub-section delimiter definition from a list of predetermined potential sub-section delimiter components, a document processor operator entering a sub-section delimiter through keyboard keystrokes, entering a sub-section delimiter by selecting symbols on a displayed portion of the electronic version of the document, and designating at least one demarcation point on at least one displayed portion of the electronic document to create a list of demarcation points to be used as a set of delimiter definitions.

Saito discloses a document image input unit 200 that inputs a document. The pre-processing unit 210 receives the document image data from the document image input unit 200 and generally prepares the received data for further processing by the information extraction unit 204. If the received data represents a color image, the pre-processing unit 201 also digitized the image data into binary data. (Paragraph [0040], lines 6-12). The information extraction unit 204 generally extracts certain information necessary for generating a predetermined database (Paragraph [0041], lines1-3). An optical character recognition unit (OCR) 207 converts alphanumeric characters in the character sub-areas into computer recognizable data such as in an ASCII format (Paragraph [0041], lines 10-14). Saito discloses an exemplary search template that includes an user-defined element name, their corresponding coordinates, indentation, font size, font type, as well as no of lines (Paragraph [0050], lines 3-6).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Saito the teachings of Satomayor such that any paper document can be transformed into an electronic version and stored onto a database for easy retrieval as well as avoid losing documents.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satomayor in view of Saito as applied to claim 2 above, and further in view of Kuga et al (US 5,276,616). The teachings of Sotomayor as modified by Saito have been discussed above.

Sotomayor as modified by Saito fails to teach displaying the created index, checking that the displayed index is correct and correcting the index.

Kuga further discloses an index generating unit 6 including an index entry list generator 22 connected to text storage 20 for extracting index entries from the textual data, an index entry storage 24 connected to index entry list generator 22 for storing the index entries outputted from the generator 22, and an index editor 26 for editing the index entries stored in index entry storage 24 based on the instructions from the input unit 2, which includes a keyboard (col 7, line 24) and for applying the edited index entries to printer 10. Such disclosure teaches checking and correcting the index. Index editor 26 is for alphabetically rearranging the index entries and classifying the same into different initial letters to enable printing of the index (col 7, lines 40-52). Kuga also discloses a text input unit, which is a flexible disk driver for applying text data stored in an external medium to text editor 18, and the output of the text editor is connected to display (col 7, lines 34-36). Such disclosure teaches that the text is in an electronic form. Kuga further discloses that the input unit 2 is to enable input by an operator by generating signals such as character data or operation codes in response to a manual operation, a text editing unit 4

connected to the input unit 2, a display unit 8 for displaying the edited text or the like, an index generating unit 6 connected to input unit 2 and text editing unit 4 for automatically generating an index from the text edited by text editing unit 4 and index generating unit for printing the edited text or the index on paper 28 (col 7, lines 10-23). Kuga teaches a keyword database for storing extracted set of keywords that are updated and added by the operator through the keyboard (col 3, lines 35-45).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Kuga to the teachings of Sotomayor as modified by Saito in order to ensure the accuracy of the index such that erroneous results are not produced as a result from misinterpreted or misread document indexes.

4. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sotomayor in view of Saito as applied to claim 10 above, and further in view of Schmidt et al (US 4,903,229). The teachings of Sotomayor as modified by Saito have been discussed above.

Sotomayor as modified by Saito fail to teach that the print engine comprises a xerographic printer.

Schmidt teaches a forms generating and information retrieval system utilizing a xerographic print engine 24 (col 2 line 34).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the teachings of Schmidt to the teachings of Sotomayor as modified by Saito because the xerographic print engine generates forms and inures the benefits of graphic reproduction.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sotomayor in view of Saito and Schmidt as applied to claim 15 above, and further in view of Herregods et al (US 6,064,397). The teachings of Sotomayor as modified by Saito and Schmidt have been discussed above.

Sotomayor as modified by Saito and Schmidt fail to teach that the print engine comprises an inkjet printer.

Herregods teaches that a printer can be a inkjet printer (col 1 line 42).

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the teachings of Herregods to the teachings of Sotomayor as modified by Saito and Schmidt because an inkjet printer can provide a reproduction of colored document, therefore it can provide a more precise reproduction of the document when the document includes colored features.

6. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sotomayor in view of Brooks et al (US 5,754,673).

Sotomayor discloses an automatic index creation for a word processor. Sotomayor discloses that the IPF paragraph objects for the source document 20 is scanned to find all headings in a document (col 15, lines 60-63). Such disclosure teaches searching the document to find occurrences of items corresponding to the define sub-section delimiter. Sotomayor also discloses that for the table-of-contents index list 43, the summary page generator 40 always generates all 6 heading levels rather than giving the user the ability to select the number of level headings (col 15, lines 60-63 and col 16, lines 1-5). Such disclosure teaches using the found items to separate the document into the separate sections.

Sotomayor fails to teach scanning the document to generate a scanned document data, performing recognition functions on the scanned document data to generate a recognized version of the document, and the sub-section delimiter comprises marking a paper version of the document with at least one predetermined machine-readable demarcation symbol prior to scanning the document.

Brooks discloses an imaging device 58 and Brooks discloses that the processing circuitry 78 receives the scan output generated by imaging device 58, a series of picture elements or pixels, and converts the received data into a stream of bytes or bits of data (col 4, lines 64-67). Brooks discloses that the image data derived from the imaging device 58 is utilized to perform machine character recognition to ascertain the courtesy amount on the documents 24 being processed (col 5, lines 22-25). Such disclosure teaches performing recognition functions on the scanned document data to generate a recognized version of the document. Brooks also discloses a magnetic ink character recognition and an optical character recognition (col 6, lines 1-10). The character line on the document contains the identification of the associated bank number, customer's account number, check number, and other coding numbers which provide information as to the type of document (col 6, lines 7-15). Such disclosure teaches marking a paper version of the document with at least one predetermined machine-readable demarcation symbol prior to scanning the document.

Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to integrate the teachings of Brooks to the teachings of Sotomayor such that the producer or writer of the document can designate the sub-section delimiter before the document is transformed into an electronic version such that the sub-section delimiter is not

changed by an unauthorized operator, and therefore, ensures the authenticity of the document and reserves the rights for the writers.

Allowable Subject Matter

7. Claims 7 and 8 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

Prior art of record, Sotomayor and Saito, either taken alone or in combination fail to teach performing one of document recognition and optical character recognition on the selected exemplary sub-section title to determine at least one recognized property, and using the at least one recognized property of the exemplary sub-section title as a sub-section delimiter definition.

Response to Arguments

9. Applicant's arguments with respect to claim2, 4-6, 10-13, 15-18 and 20-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KUMIKO C. KOYAMA whose telephone number is (571)272-2394. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Paik can be reached on 571-272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kumiko C. Koyama/
Examiner, Art Unit 2887
March 03, 2008